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Ralf Brederlow

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EXAMINER

SNOW, COLLEEN ERIN

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RALF BREDERLOW

Appeal 2008-4131
Application 10/714,536
Technology Center 2800

Decided:¹ April 28, 2009

Before EDWARD C. KIMLIN, CHARLES F. WARREN, and
MICHAEL P. COLAIANNI, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

DECISION ON APPEAL

Applicant appeals to the Board from the decision of the Primary
Examiner finally rejecting claims 13 through 24 in the Office Action mailed

¹ The two month time period for filing an appeal or commencing a civil action specified in 37 C.F.R. § 1.304, begins to run from the “Decided” date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

May 26, 2006. 35 U.S.C. §§ 6 and 134(a) (2002); 37 C.F.R. § 41.31(a) (2006).

We reverse the decision of the Primary Examiner.

Claim 13 illustrates Appellant's invention of a polymer transistor arrangement, and is representative of the claims on appeal:

13. A polymer transistor arrangement, comprising:
a polymer transistor formed in and/or on a substrate including:
a first source/drain region;
a second source/drain region;
a channel region between the first and second source/drain regions;
a gate region
a gate-insulating layer between the channel region and a gate region; and
a drive circuit providing the first source/drain region with a voltage of sufficiently large magnitude and the gate region with a drain voltage of a sufficiently small magnitude, such that the polymer transistor has properties similar or identical to those of a Schottky diode.

The Examiner relies upon the evidence in these references (Ans. 3):

Bao	US 6,150,668	Nov. 21, 2000
Jackson	US 6,720,572 B1	Apr. 13, 2004

Appellant requests review of the ground of rejection under 35 U.S.C. § 103(a) advanced on appeal: claims 13 through 17 and 19 through 24 as obvious over Bao; and claims 13 through 24 as obvious over Jackson. App. Br. 6; Ans. 3 and 5.

Appellant argues each ground of rejection based on claim 13. *See generally* App. Br. Thus, we decide this appeal based on claim 13.

37 C.F.R. § 41.37(c)(1)(vii) (2006).

Issue

The dispositive issue in this appeal is whether the last clause of claim 13, “a drive circuit providing the first source/drain region with a voltage of sufficiently large magnitude and the gate region with a drain voltage of a sufficiently small magnitude, such that the polymer transistor has properties similar or identical to those of a Schottky diode,” specifies a limitation which defines the claimed polymer transistor arrangement.

Discussion

The Examiner admits that Bao and Jackson do not disclose a drive circuit of a polymer transistor arrangement which satisfies the subject limitation of claim 13. Ans. 3, 5, 7, and 8; Bao col. 9, ll. 23-33; Jackson col. 3, ll. 41-50, and Fig. 2.

Nonetheless, the Examiner holds claim 13 is “anticipated” by each of Bao and Jackson because the subject limitation of claim 13 is an intended use and a method limitation, and thus, does not structurally distinguish the prior art polymer transistor arrangement, and further is a product-by-process limitation. Ans. 3, 5, and 7-9.

Appellant contends that the subject limitation of claim 13 is not a method or product-by process limitation, but instead is a functional limitation which is entitled to patentable weight. App. Br. 8 and 10; Reply Br. 2-3. We agree with Appellant.

We first determine whether the subject limitation of claim 13 when considered in light of the disclosure in the Specification, *see, e.g., In re Icon Health and Fitness, Inc.*, 496 F.3d 1374, 1379 (Fed. Cir. 2007); *In re Am.*

Acad. of Sci. Tech. Ctr., 367 F.3d 1359, 1364 (Fed. Cir. 2004), and cases cited therein; *In re Morris*, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997), is functional language that confers a structural limitation on the claimed polymer transistor arrangement, *see, e.g., In re Schreiber*, 128 F.3d 1473, 1478 (Fed. Cir. 1997); *In re Echerd*, 471 F.2d 632, 634-35 (CCPA 1973); *In re Ludtke*, 441 F.2d 660, 663-64 (CCPA 1971); *In re Swinehart*, 439 F.2d 210, 212-13 (CCPA 1971) (there is nothing intrinsically wrong in defining something by what it does rather than by what it is), or conveys a method or intended use concept. *See, e.g., In re Yanush*, 477 F.2d 958, 959 (CCPA 1973); *In re Casey*, 370 F.2d 576, 579-80 (CCPA 1967); *In re Otto*, 312 F.2d 937, 939-40 (CCPA 1963).

On this record, we determine the plain language of the subject limitation of claim 13 makes clear that the polymer transistor arrangement must be capable of exhibiting properties similar or identical to those of a Schottky diode under voltages that can be applied by the drive circuit. *See Spec.*, e.g., 3-5. Therefore, this functional limitation confers a structural limitation further defining the claimed polymer transistor arrangement and its drive circuit.

Furthermore, the subject limitation of claim 13 is not a product-by-process limitation because there are no claim limitations specifying the manner in which the claimed polymer transistor arrangement is made. *See, e.g., In re Thorpe*, 777 F.2d 695, 697 (Fed. Cir. 1985); *In re Bridgeford*, 357 F.2d 679, 680-83 (CCPA 1966).

Thus, the Examiner's refusal to give effect to this limitation is improper. *See, e.g., In re Geerdes*, 491 F.2d 1260, 1262-63 (CCPA 1974)

(in considering grounds of rejection “every limitation in the claim must be given effect rather than considering one in isolation from the others”).

Accordingly, in the absence of a scientific explanation or evidence establishing that the disclosures of Boa and of Jackson would have suggested the claimed polymer transistor arrangements encompassed by claim 13 to one of ordinary skill in this art, a prima facie case of obviousness has not been established. Therefore, we reverse the grounds of rejection under 35 U.S.C. § 103(a) advanced on appeal.

The Primary Examiner’s decision is reversed.

REVERSED

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